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动物分类学报

仿胭螨属，枝厉螨属和革鞍螨属三新种记述（蜱螨亚纲，中气门目，胭螨科）

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摘 要 记述仿胭螨属、枝厉螨属和革鞍螨属各1新种：山东仿胭螨 *Rhodacarellus shandongensis* sp. nov.，刘氏枝厉螨 *Dendrolaelaps liujingyuani* sp. nov. 和长江革鞍螨 *Gamasellodes changjiangensis* sp. nov.。
关键词 胭螨科，仿胭螨属，枝厉螨属，革鞍螨属，新种.
中图分类号 Q959.91

我国已记载仿胭螨属 *Rhodacarellus* Willmann 3种，枝厉螨属 *Dendrolaelaps* Halbert 9种和革鞍螨属 *Gamasellodes* Athias-Henriot 2种，本文描述该3属各1新钟。文中测量单位为μm，括号内为测量均值。模式标本为作者采。保存于军事医学科学院微生物流行病研究所，北京。

1 山东仿胭螨，新种 Rhodacarellus shandongensis **sp. nov.**（图1~5）

形态描述 雌螨体黄色，椭圆形，两侧缘近平行，长505~516（511），宽333~344（339）。前背板长237，后背板长280~290（285），二背板均与体等宽，覆盖整个背面，后背板后侧部卷向腹面。前背板刚毛22对，末端达到下位毛基部，F毛3对。角化孔状构造4个，弧形。后背板刚毛18对，D_5很短，末端约达到与D_6基部距离的中点，D_6末端达不到D_7基部，其余毛末端均可达到下位毛基部，S_8微小，M_{11}粗长，M_{10}已掉，根据毛窝，M_{10}亦粗长。胸板长86，St2水平宽86，前及后缘均凹，胸前有1对

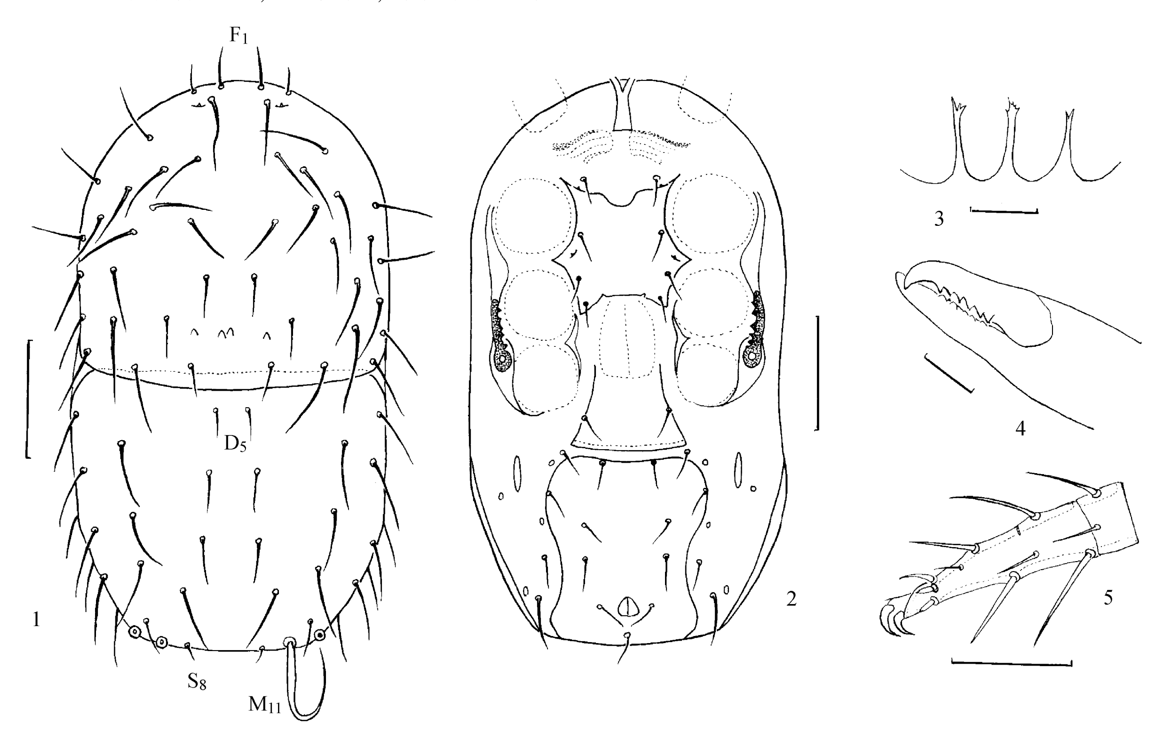


图1~5 山东仿胭螨，新种 *Rhodacarellus shandongensis* sp. nov. ♀
1. 背面（dorsum） 2. 腹面（venter） 3. 头盖（tectum） 4. 螯钳（chela） 5. 跗节Ⅱ（tarsus Ⅱ） 比例尺（scale bars）：1~2=100μm，3~4=20μm，5=50μm

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斜纹区，St_1 在胸板之前，St_2，St_3 和 MSt 均在胸板上，St_2 和 St_3 最长，MSt 最短，第 1 对隙孔位于胸板前缘。生殖板长 108，Vl_1 水平宽 86，后侧角尖，向外斜伸，呈斧形，生殖毛 1 对。腹肛板长 215，前部最宽处宽 172，侧缘内凹，肛前毛 4 对。Ad 位于肛孔中横线稍前水平，Ad 与 PA 长于肛孔。腹肛板周围表皮毛 3 对，最后 1 对较长。足后板 1 对，狭窄，另有数对小骨片。气门沟前端达到基节 III 中部。头盖 3 突细长，末端分小枝。螯钳二趾各有 1 列小齿。叉毛 2 叉。颚毛光滑，内颚毛最长，外颚毛最短。足 I 有爪。跗节 II～ IV 末端有亚刺形短毛。

雄螨　未采获。

词源：新种以正模采集地所属省命名。

鉴别特征　新种与柳氏仿胭螨 *Rhodacarellus liuzhiyingi* Ma，1995 近似，但新种后背板前缘无凹，背毛较长，腹肛板肛前毛 4 对，足后板无前突，气门沟短；而柳氏仿胭螨后背板前缘有中凹，背毛较短，腹肛板肛前毛 3 对，足后板有前突，气门沟长。

标本记录　正模♀，副模 1♀，采自枯树皮下，山东泰安(36°15′N，117°08′E)，2000-07-15。

2 刘氏枝厉螨，新种 *Dendrolaelaps liujingyuani* **sp. nov.**（图 6～ 16）

形态描述　雌螨体黄色，长椭圆形，长 376～ 398（382），前部宽 183～ 194（188）。前背板长 172～ 183（180），后部宽 129～ 151（140），前部与气门板相连，板上刚毛 19 对，其中 F 毛 3 对。角化孔状构造 4 个，弧形。后背板长 161～ 183（172），宽 129～ 151（140），前缘中部有 Π 字形凹口，并有 1 对长形小骨片，板上刚毛 15 对。背毛均短，末端远达不到下位毛基部，但 M_2 和 M_{10} 较长，S_8 微小。胸板前缘骨化弱，自第 1 对隙孔水平至后缘长 86，St_2 水平宽 54，后缘凹，St_1 位于第 1 对隙孔之前，St_2，St_3，MSt 和 3 对隙孔在胸板上。生殖板长 75，Vl_1 水平宽 54，有 1 对生殖毛。腹肛板长 108～ 118（110），后部宽 75～ 86（79），腹区方形，肛区呈圆形膨大，肛前毛 3 对。Ad 位于肛孔中横线稍前水平，Ad 长于肛孔，PA 短于 Ad。足后板细长。腹表皮毛 4 对。气门沟前端达到基节 I 中部。头盖 3 突，均细。螯钳宽短，动趾 4 齿，定趾约 5 齿。颚毛针状。足 I 有爪。股节 III 骨化小管短，螺旋形。足毛短。

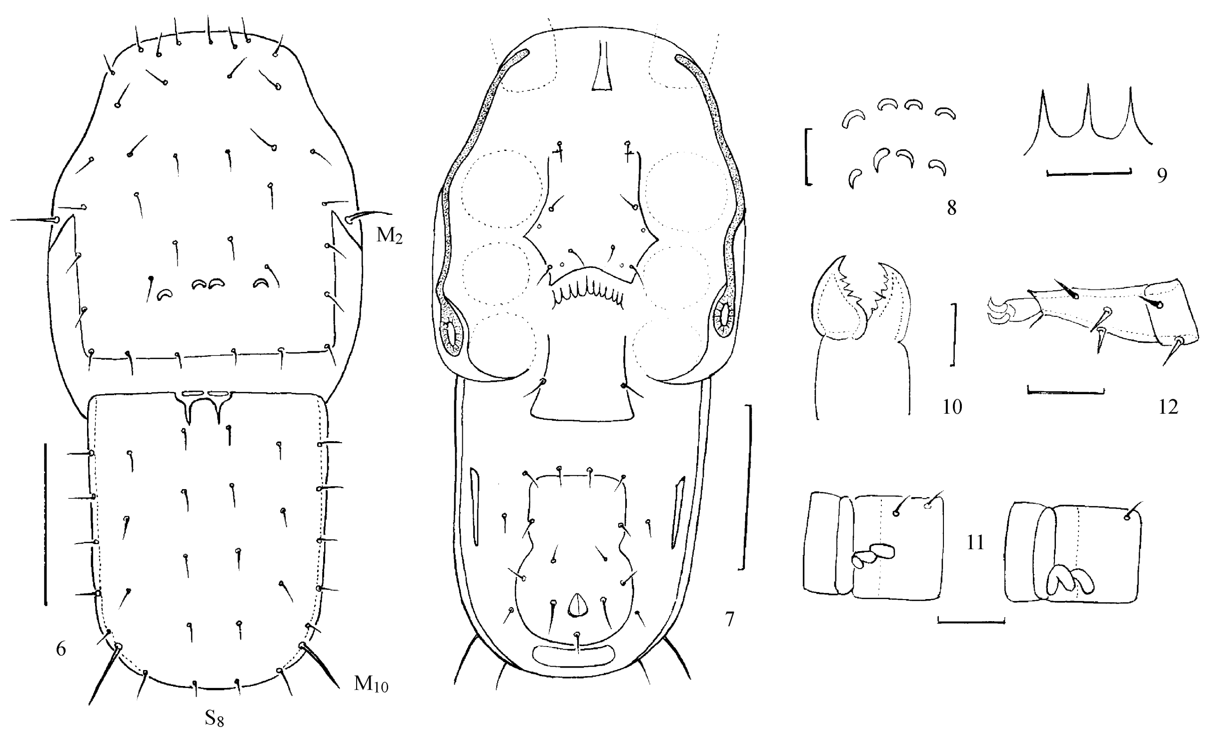


图 6～ 12　刘氏枝厉螨，新种 *Dendroladaps liujingyuani* sp. nov. ♀
6. 背面（dorsum）　7. 腹面（venter）　8. 角化孔状构造变异（variations of chitinous pore-like structures）　9. 头盖（tectum）　10. 螯钳（chela）　11. 股节 III 骨化小管（sclerous tubule in femur III）　12. 跗节 II（tarsus II）　比例尺（scale bars）：6～ 7 = 100 μm，8～ 12 = 20 μm

雄螨　体长 376～ 387（382），前部宽 172～ 183（177），前部宽于后部。前背板长 183，宽 129～ 140（134），刚毛 23 对，部分毛位于板外。后背板长 172～ 183（177），宽 129～ 140（134），刚毛 15 对，后部

有1对骨突, 由细长横梁相连。背面其它构造同雌螨。胸板长 151~161 (156), St_2 水平宽 65~70 (67), 板上刚毛4对, 第5对在胸板之外。腹肛板前凸菱形, 板上除围肛毛外有刚毛7对。围肛毛和气门沟同雌螨。螯钳定趾有1大齿和几个小齿, 导精趾细长。足 II股节有1大指形距, 膝, 胫和跗节各有1小距。

词源: 新种以我国医学昆虫学家刘井元主任医师的名字 "Liu Jingyuan" 命名, 以示对他在医学昆虫学领域里贡献的敬意。

鉴别特征 新种与二齿枝厉螨 *Dendrolaelaps bidentatus* Daele, 1977 相似, 但新种头盖3突光滑, 雌螨腹肛板肛前毛3对, 雄螨后背板1对骨突间横梁很长; 而二齿枝厉螨 头盖3突有小锯齿, 雌螨腹肛板肛前毛4对, 雄螨后背板1对骨突间横梁很短。

标本记录 正摸♀, 副摸2♀♀, 5♂♂, 采自枯树皮下, 江西庐山(29°32′N, 115°55′E), 1983-08-29。

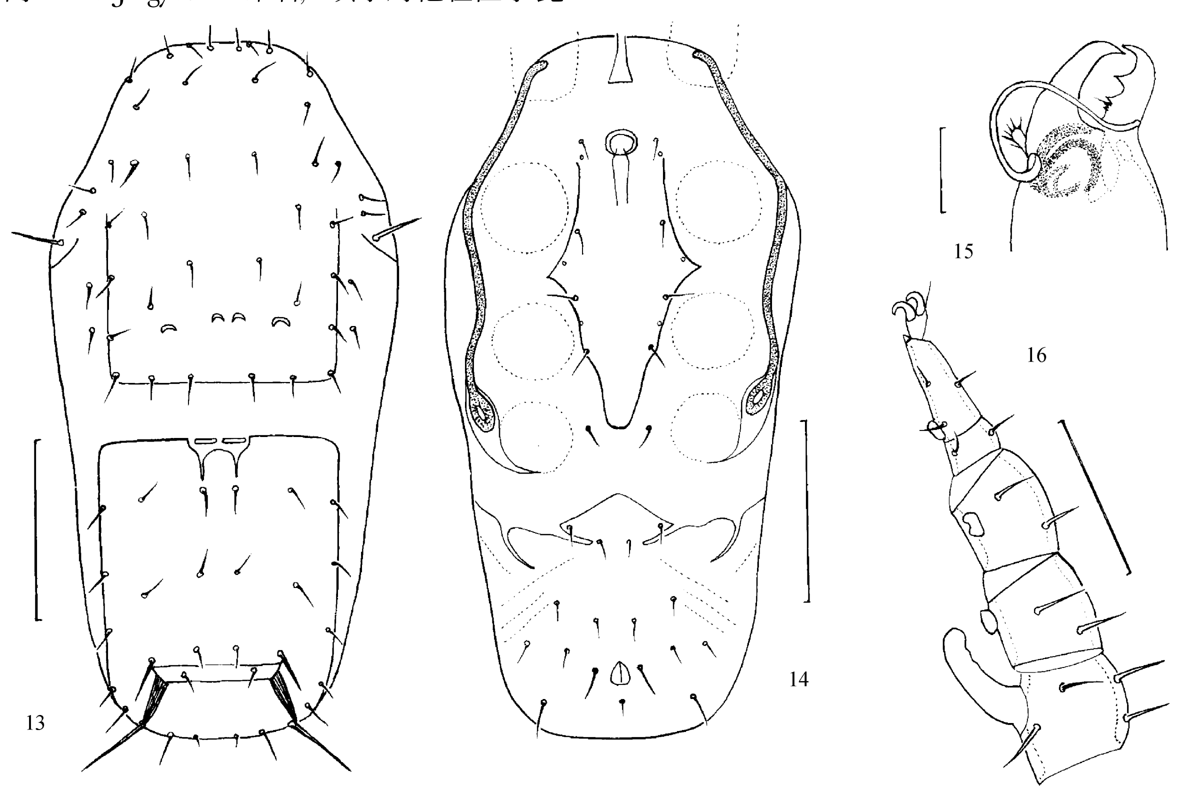


图 13~16 刘氏枝厉螨, 新种 *Dendrdaelaps liujingyuani* sp. nov. ♂
13. 背面 (dorsum) 14. 腹面 (venter) 15. 螯钳 (chela) 16. 足 II (leg II) 比例尺 (scale bars): 13~14= 100 μm, 15= 20 μm, 16= 50 μm

3 长江革鞍螨, 新种 Gamasellodes changjiangensis sp. nov. (图 17~27)

雌螨 体黄色, 狭长椭圆形, 长 247~333 (292), 宽 118~183 (153), 背腹刚毛多短小光滑, 仅后部有少数细长毛。前背板长 118~161 (144), 宽97~140 (118), 刚毛16对, 末端约达到与下位毛基部距离的中点。后背板长 118~172 (148), 宽 97~140 (123), 刚毛15对, 多数毛同前背板毛, 后侧方刚毛变长, M_{11} 最长, S_8 微小。背表皮毛 7~8 对。胸板长 54~86 (73), 最狭处宽 43~65 (54), 前缘骨化弱, 后缘凹, 胸毛3对。MSt 在板后表皮上。生殖板长 54~75 (62), 最狭处宽 32~43 (37), 后部膨大, 具毛1对。腹肛板横椭圆形, 长 65~108 (83), 宽 97~140 (118), 板上除围肛毛外有刚毛4对, 后侧方1对最长, 并长于 PA; 肛孔前中毛位于前侧毛基部水平或之后。Ad 位于肛孔中横线水平, 稍长于肛孔, PA 长于 Ad。足后板2对, 前对弧形, 后对狭椭圆形。腹肛板前方表皮有毛4对, 腹肛板及其周围表皮毛的位置变异较大。气门沟前端达到基节 I 中部。头盖3突。螯钳动趾2齿, 定趾4齿。颚角牛角状, 指向前方。颚毛短而光滑。足毛短小。

雄螨 体长199, 宽113。前背板长105, 宽86; 后背板长94, 宽79。背面同雌螨。胸殖板长 (前缘自 St_1 水平始) 94, St_2水平宽38, 刚毛5对。腹肛板占据腹面整个后部, 长64, 宽86, 前缘中部微凸, 板上除围肛毛外有刚毛7对, 近前缘2对微小, 最后1对较长。气门沟前端达到基节 I 后部。螯钳导

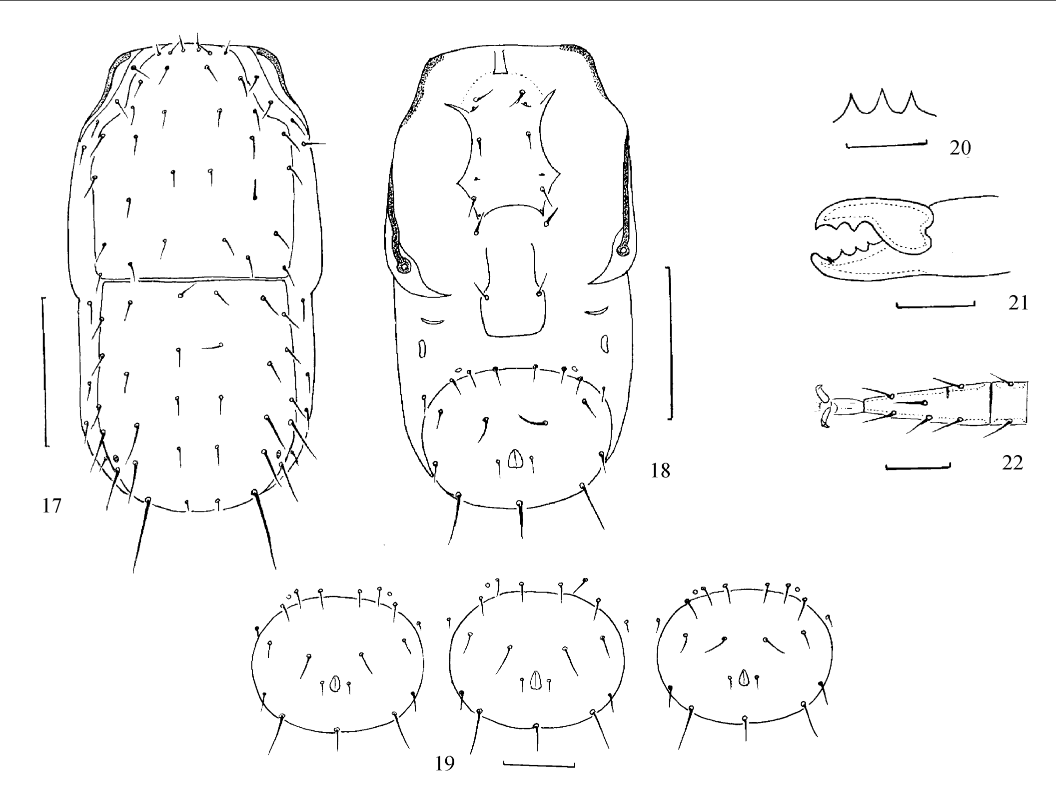


图 17~ 22 长江革鞍螨, 新种 *Gamasellodes changjiangensis* sp. nov. ♀
17. 背面 (dorsum) 18. 腹面 (venter) 19. 腹肛板及其周围刚毛位置的变异 (variations of setae place on ventro-anal shield and its around cuticle) 20. 头盖 (tectum) 21. 螯钳 (chela) 22. 跗节 II (tarsus II) 比例尺 (scale bars): 17~ 18= 100 μm, 19= 50μm, 20~ 22= 20 μm

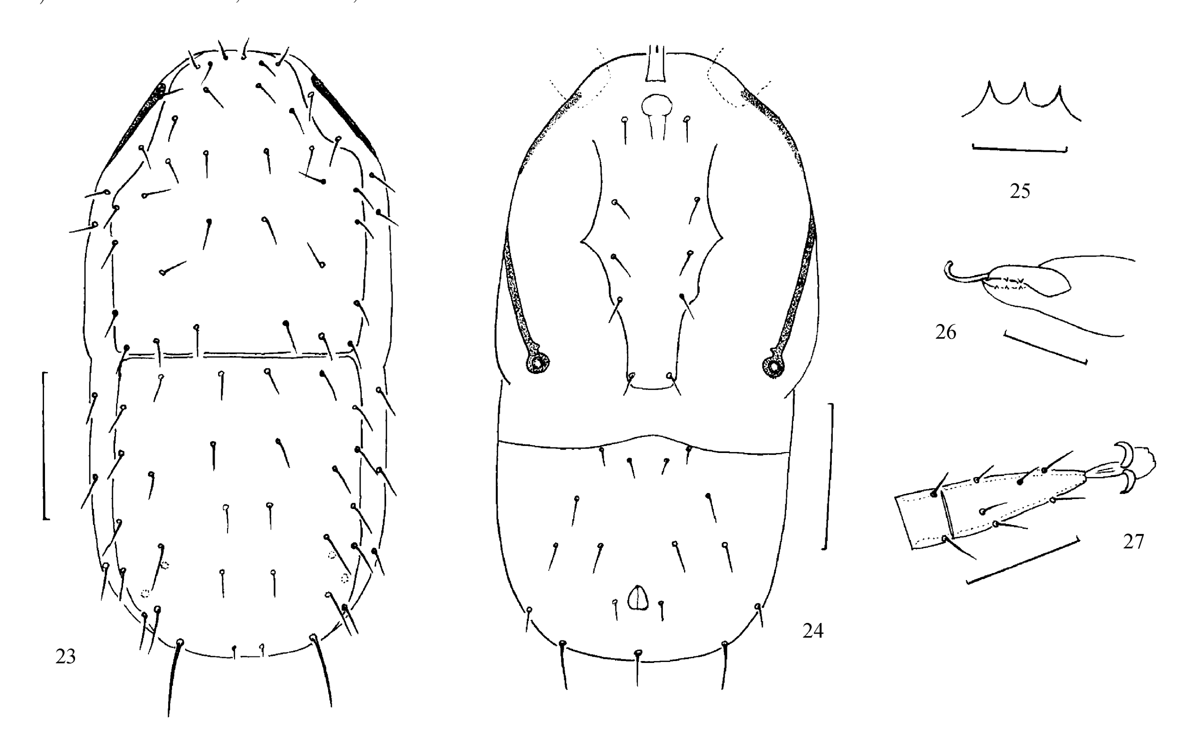


图 23~ 27 长江革鞍螨, 新种 *Gamasellodes changjiangensis* sp. nov. ♂
23. 背面 (dorsum) 24. 腹面 (venter) 25. 头盖 (tectum) 26. 螯钳 (chela) 27. 跗节 II (tarsus II) 比例尺 (scale bars): 23~ 24= 50μm, 25~ 27= 20 μm

精趾细长, 前端呈圆形弯曲。围肛毛, 头盖, 颚毛及足毛同雌螨。

词源: 新种以长江命名。

鉴别特征 我国该属已发现 3 种, 可按下面检

索表鉴别。

1 腹肛板前中毛位于前侧毛基部水平或之后 ………………………… ………………… 长江革鞍螨, 新种 *G. changjiangensis* **sp. nov.**
腹肛板前中毛位于前侧毛基部水平之前 …………………………… 2
2 腹肛板前缘较平 ………… 新双色革鞍螨 *G. novibicolor* **Ma, 2005**
腹肛板前缘突出 ……… 双色革鞍螨 *G. bicolor* **(Berlese, 1948)**

正模♀, 采自腐植土, 江西九江(29°44′N, 116°00′E), 1983-09-02。副模4♀♀, 1♂, 采自树下腐植土, 安徽黄山(30°08′N, 118°10′E), 2005-08-24。

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Ma, Li-M 2005. Redescription of *Rhodacarellus liuzhiyingi* and supplemental characters of *Rhodacarellus yalujiangensis* and *Dendrolaelaps baixuelii* (Acari: Gamasina: Rhodacaridae). *Acta Arach. Sinica*, 14 (1): 17-22. [马立名, 2005. 柳氏仿胭螨重新描述和鸭绿江仿胭螨及白氏枝厉螨特征补充 (蜱螨亚纲: 革螨股: 胭螨科). 蛛形学报, 14 (1): 17~22]

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Wisniewski, J. und Hirschmann, W. 1990. Variabilitat der Adulten von *Dendrolaelaps bidentatus* Daele, 1977 (Acarina, Trichopygidiina) und Beschreibung der Entwicklungsstadien dieser Art. *Ann. Zool.*, 43 (10): 271-286.

THREE NEW SPECIES OF THE GENERA RHODACARELLUS, DENDROLAELAPS AND GAMASELLODES (ACARI, MESOSTIGMATA, RHODACARIDAE)

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Abstract Three new species of the family Rhodacaridae are described in the present paper. Type specimens are deposited in the Entomology Gallery, Institute of Microbiology and Epidemiology, Academy of Military Medical Sciences, Beijing, coll. author.

1 *Rhodacarellus shandongensis* **sp. nov.** (Figs. 1-5)

♀. Length 505-516 (av. 511) μm, width 333-344 (av. 339) μm. Both dorsal shield covering entire dorsum, posterior dorsal shield extending to venter postero-laterally. Anterior dorsal shield with 22 pairs of setae, the end reaching to insertion of next setae, setae F 3 pairs. Chitinous pore-like structures 2 pairs, arc-shaped. Posterior dorsal shield with 18 pairs of setae, D_5 shorter, S_8 minute, remains longer, M_{10} and M_{11} long and stout. Presternal cuticle with 1 pair of lines regions. St_1 situated before sternal shield, St_2, St_3 and MSt on the shield, the 1st pair of pores at anterior margin of the shield. Genital shield hatchet-shaped, with 1 pair of setae. Ventro-anal shield rectangular, with concave lateral margins, preanal setae 4 pairs. Ad situated before level of middle of anus, both Ad and PA longer than anus. Ventral cuticle setae 3 pairs, the last pair longer. Metapodal shields 1 pair, narrow. Peritreme short, reaching to level of middle of coxa Ⅲ anteriorly. Tectum with 3 slender tines, the ends furcate. Both digits of chela with a row of denticles respectively.

♂ Unknown.

Etymology. The new species is named after the province to which its type locality belongs.

The new species is similar to *Rhodacarellus liuzhiyingi* Ma, 1995, but in the new species concavity absent at anterior margin of posterior dorsal shield, dorsal setae longer, preanal setae 4 pairs on ventro-anal shield, metapodal shields without thread, peritreme short; in the latter species concavity present at anterior margin of posterior dorsal shield, dorsal setae shorter, preanal setae 3 pairs, metapodal shields with anterior thread, peritreme long.

Holotype ♀, paratype 1 ♀, under bark of tree, from Tai′an (36°15′N, 117°08′E), Shandong Province, 15 July 2000.

2 *Dendrolaelaps liujingyuani* **sp. nov.** (Figs. 6-16)

♀. Length 376-398 (av. 382) μm, width 183-194 (av. 188) μm. Anterior dorsal shield with 19 pairs of setae, of which F-setae 3 pairs. Chitinous pore-like structures 2 pairs, arc-shaped. Posterior dorsal shield with a Π-like concavity at anterior margin, 15 pairs of setae on the shield. All dorsal setae short, the end far distant from insertion of next setae, but M_2 and M_{10} longer, S_8 minute. Posterior margin of sternal shield concave, St_1 situated before the shield, St_2, St_3, MSt and 3 pairs of pores on the shield. Genital shield with 1 pair of setae. Ventro-anal shield with 3 pairs of preanal setae and 3 perianal setae. Ad situated before level of middle of anus, longer than anus, PA shorter than Ad. Metapodal shields slender. Peritreme reaching to middle of coxa Ⅰ. Tectum 3-tined. Chela short, with 4 denticles on movable digit and about 5 denticles on fixed digit. Sclerous tubule in femur Ⅲ short, spiral.

♂. Length 376-387 (av. 382) μm, width 172-183 (av. 177) μm. Anterior dorsal region with 23 pairs of setae (including cuticle setae), posterior dorsal shield with 15 pairs of setae; posterior region bearing 2 apophysis, between which with long cross beam. Sternal

shield with 4 pairs of setae, the 5th pair of setae on cuticle. Anterior projection of ventro-anal shield rhombic, with 7 pairs of setae except perianal setae on the shield. Spermatodactyl of chela very long and thin. Leg Ⅱ with a large finger-like spur on femur and a small spur on genu, tibia and tarsus respectivery.

Etymology. The new species is named in honor of Prof. LIU Jing-Yuan, medical entomologist of China.

The new species is similar to *Dendrolaelaps bidentatus* Daele, 1977, but in the new species 3 tines of tectum smooth, instead of sawtoothed; ventro-anal shield of female with 3 pairs of preanal setae, instead of 4 pairs; posterior dorsal shield of male with long cross beam between apophysis, instead of short cross beam.

Holotype ♀, paratypes 2 ♀♀ and 5 ♂♂, under bark of tree, from Mt. Lu (29°32′N, 115°55′E), Jiangxi Province, 29 Aug. 1983.

3 *Gamasellodes changjiangensis* **sp. nov.** (Figs. 17-27)

♀. Length 247-333 (av. 292) μm, width 118-183 (av. 153) μm. Anterior dorsal shield bearing 16 pairs of short simple setae, its tip arriving middle between its base and base of next seta. Posterior dorsal shield with 15 pairs of setae, most of which short, setae of postero-lateral part elongated, M_{11} the longest, S_8 minute. Posterior margin of sternal shield concave, with 3 pairs of setae. MSt on cuticle behind the shield. Posterior part of genital shield expanded, with 1 pair of setae. Ventro-anal shield transverse oval, with 4 pairs of setae except perianal setae, last pair longer than PA, antero-central setae situated at or behind level of base of antero-lateral setae. Ad situated at level of middle of anus, slightly longer than anus, PA longer than Ad. Metapodal shields 2 pairs, anterior pair curved, posterior pair narrow oval. Cuticle setae 4 pairs. Peritreme reaching to middle of coxa Ⅰ anteriorly. Tectum 3-pronged. Movable digit of chela bidentate, fixed digit with 4 denticles.

♂ Length 199 μm, width 113 μm. Dorsum as in female. Sterno-genital shield with 5 pairs of setae. Ventro-anal shield large, anterior margin with a medial projection, bearing 7 pairs of setae except perianal setae, the last pair longer. Peritreme reaching to posterior part of coxa Ⅰ. Spermatodactyl of chela slender. Perianal setae and tectum as in female.

Etymology. The new species is named in Changjiang River.

Key to 3 known species of the genus *Gamasellodes* **in China**

1. Antero-central setae on ventro-anal shield situated at or behind level of base of antero-lateral setae …………… *G. changjiangensis* **sp. nov.**
   Antero-central setae on ventro-anal shield situated before level of base of antero-lateral setae ………………………………………………… 2
2. Anterior margin of ventro-anal shield even ………………………………………………………………………… *G. novibicolor* **Ma, 2005**
   Anterior margin of ventro-anal shield protruding ………………………………………………………………… *G. bicolor* **(Berlese, 1948)**

Holotype ♀, ex humus soil, from Jiujiang (29°44′N, 116°00′E), Jiangxi Province, 2 Sep. 1983. Paratypes 4♀♀ and 1 ♂, ex forest soil, from Mt. Huang (30°08′N, 118°10′E), Anhui Province, 24 Aug. 2005.

Key words Rhodacaridae, *Rhodacarellus*, *Dendrolaelaps*, *Gamasellodes*, new species.